# This Page Is Inserted by IFW Operations and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

### IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

# UK Patent Application (19) GB

(1) 2 199 246<sub>(13)</sub>/

(43) Application published 6 Jul 1988

- (21) Application No 8728552
- (22) Date of filing 7 Dec 1987
- (71) Applicant-Ki Yip Chemical Works Limited

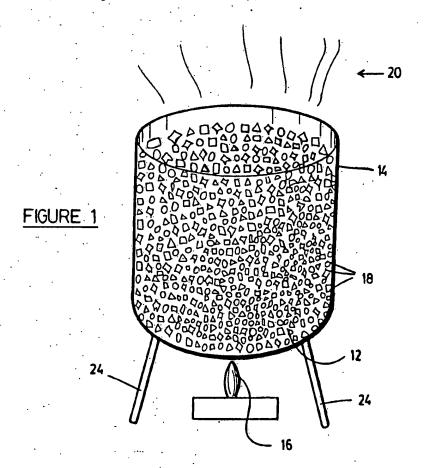
(Incorporated in Hong Kong)

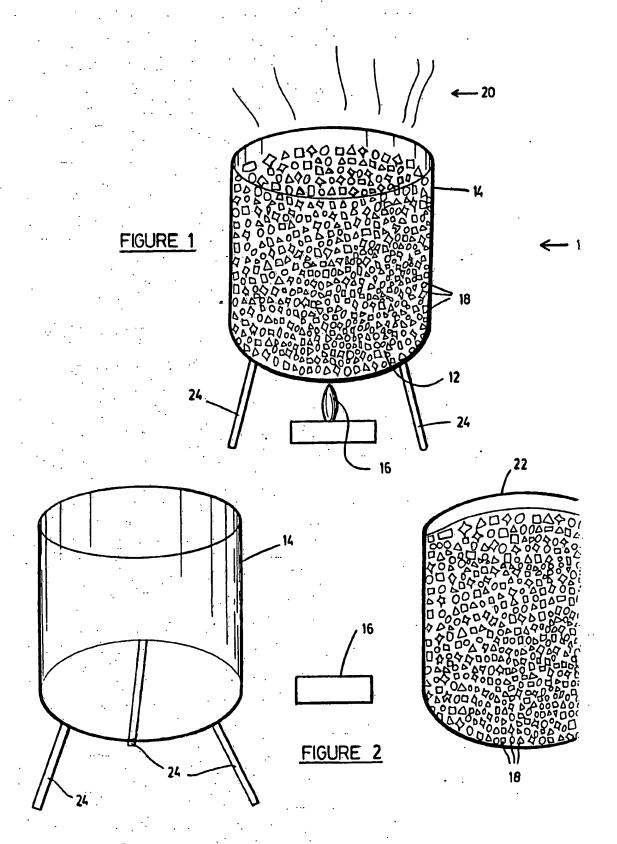
Ground Floor, Kwal Bo Industrial Building, 40 Wong Chuk Hang Road, Aberdeen, Hong Kong

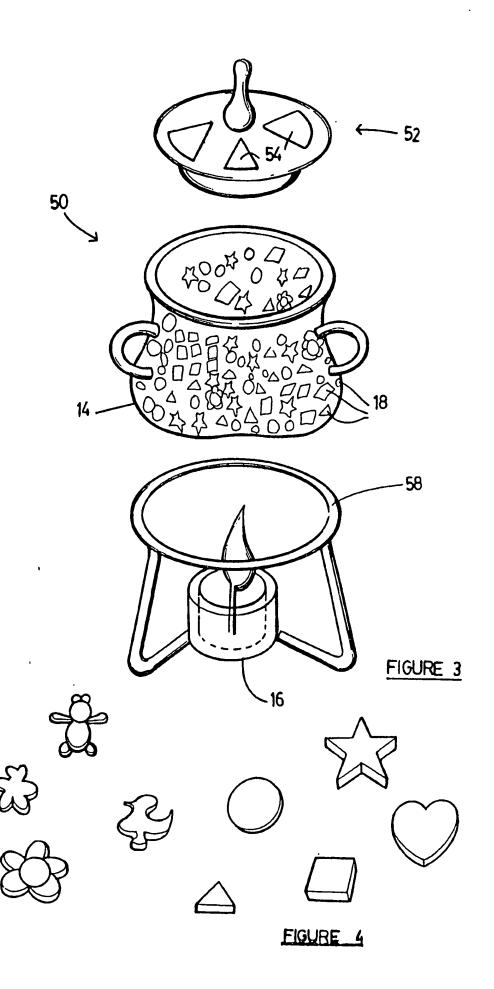
- (72) Inventor Chun Blu Michael Lam
- (74) Agent and/or Address for Service Lloyd Wise Tregear & Co. Norman House, 105-109 Strand, London, WC2R 0AE

- (51) INT CL\* A61L 9/12
- (52) Domestic classification (Edition J): A5G. V
- (56) Documents cited GB 0397238 GB 0990790 GB 1058844 GB 0272900
- (58) Field of search A5G C5W Selected US specifications from IPC sub-class A61L

- (54) Wax air freshener
- (57) An air freshener 10 comprises a body 12 of waxed material impregnated with a fragrance contained within containment means 14, which fragrance is released from the body 12 by heat.







#### WAX AIR FRESHENER

The invention relates to a wax air freshener, and in particular to the effective release of fragrance from a wax body.

Present air fresheners are relatively complicated in design and release their fragrance at a controlled slow 10 rate over a relatively long period.

In accordance with the present invention, an air freshener comprises waxed material impregnated with a fragrance.

Such is simple, effective and releases fragrance 15 slowly over a relatively long time.

Suitably the air freshener includes containment means holding a body of wax impregnated with a fragrance, which fragrance is released from the wax body by heat.

Such an arrangement releases fragrance quickly 20 over a relatively short time when heated.

Suitably the wax body is heated by "cooking" the wax body, and in particular by placing a naked flame underneath the containment means containing the wax body, such that the wax melts and the fragrance within the wax is released by evaporation.

Suitably the fragrance is retained within the waxed material by a stabilizer.

٠:

The waxed material is suitably formed from a plurality of different types of wax, such as

5 micro-crystalline wax, polyethylene wax and paraffin wax. Even more preferably the waxed material is substantially made from approximately 90% paraffin wax, and less than 10% of other waxes. Most suitably of all, the waxed material is made from approximately 90% paraffin wax, approximately 1% micro-crystalline wax, and approximately 1% polyethylene wax. The waxed material is also provided with a fragrance/stabilizer combination of approximately 5% by weight. Finally, the waxed material may also be impregnated with a colouring agent and with titanium oxide in order to obtain the required waxiness/opaqueness.

from a plurality of individual pieces of wax. Furthermore, these plurality of wax pieces may be shaped, such that a plurality of these wax pieces can be either stacked together to form a decorative air freshener, or alternatively sprinkled individually around a room.

Preferably the plurality of wax pieces have a number of different shapes, whereby a decorative air freshener can be formed having a number of different shaped components. For instance, one wax piece may be square-shaped, while another

wax piece may be star-shaped. In addition, these wax pieces can be of different colours and different sizes.

Alternatively, the air freshener can be divided into different regions, and each region supplied with a plurality of similar wax pieces, while the other regions are supplied with a plurality of different wax pieces.

The containment means is suitably transparent, such that the different shapes and colours of the wax pieces can be viewed through the container. The

- the naked flame to melt the wax contained within the containment means, and it is also made from a material having a very high melting point, such that the containment means does not melt when the naked flame is applied.
- Suitably the air freshener may be provided in kit form, in other words with heating means, a container and a bag of wax pieces, such that the air freshener can be built up from its basic components.

The advantage of the air freshener is that it is simple and effective, and quick release of fragrance can be obtained at a specific time.

The invention will now be described by way of example with reference to the accompanying drawings in which:-

5

5

Figure 1 is a perspective view of an air freshener in use in accordance with the invention;

Figure 2 shows a kit to form the air freshener arrangement shown in Figure 1;

Figure 3 is a perspective view of an alternative air freshener in accordance with the invention; and

Figure 4 shows a further air freshener in

accordance with the invention, and shows a number of different wax pieces (shown enlarged) that car be used to build up the wax body of the air freshener shown in Figure 1.

In Figure 1 an air freshener 10 is shown having a body of wax 12 in a container 14.

The body 12 of the candle is formed from a plurality of wax pieces 18 having different shapes, sizes and colours, and in particular the wax pieces 18 are shown stacked one upon the other to form the body 12 of the air freshener.

The wax pieces are kept in a stacked state, since they are held in place within the container 14, which is suitably of transparent material, such that the external surface of the air freshener is visible to the outside.

25 The container 14 is also heat-conductive in order to allow heat to pass through to the wax body 12, and is also made

5

from a material having a very high melting point, such that the container does not melt when for instance a naked flame is applied.

The wax pieces are impregnated with a fragrance, such that when heat is applied by a naked flame (see 16) to the wax body, the wax melts and the fragrance (see 20) evaporates to the surrounding environment.

In Figure 2 a kit of components to form the air freshener shown in Figure 1 is illustrated, comprising a 10 heating arrangement 16, a container 14 and plurality of wax pieces 18, which are suitably provided in a bag 22. The air freshener of Figure 1 can be easily built up from the kit parts shown in Figure 2 by "pouring" in the wax pieces 18 into the container 14 to form a wax body (which has a decorative effect due to the different size, shape and colour of the wax pieces), and placing the heating means 16 underneath the base of the container. The container 14 is provided with a plurality of legs 24, such that the heater can be placed underneath the container for melting of the wax body of the air freshener.

In Figure 3 an alternative air freshener 50 having the basic features of the air freshener 10 is shown, except in that the container is provided with a lid 52 formed with holes 54 to allow controlled slow release of fragrance. In order to allow quicker release of fragrance, the lid 52 is simply removed. The heater 56 shown in

Figure 3 comprises a candle within a metal cup, the cup having extensions which form a stand 58 for the container (which in consequence requires no legs).

In Figure 4, a further air freshener is shown

comprising a number of wax pieces 18 sprinkled individually on a surface. The figure also shows a number of different wax pieces 18 having different shapes and sizes in order to exemplify the multitude of different possibilities that exist for wax pieces to make up the air freshener wax body of Figure 1, and the decorative nature of such an air freshener. Such air fresheners are easy to use, and provide a quick fragrance effect to the surrounding environment when a naked flame is applied. Furthermore, the air freshener formed from a plurality of wax pieces provides an effective decorative external appearance.

20

### CLAIMS:-

- An air freshener comprising waxed material impregnated with a fragrance.
- 2. An air freshener as claimed in Claim 1 which includes containment means holding a body of wax impregnated with a fragrance, which fragrance is released from the wax body by heat.
  - 3. An air freshener as claimed in Claim 2 wherein the wax body is heated by "cooking" the wax body.
- 10 4. An air freshener as claimed in Claim 3 wherein the wax body is cooked by placing a naked flame underneath the containment means containing the wax body, whereby the wax melts and the fragrance within the wax is released by evaporation.
- 15 5. An air freshener as claimed in any preceding Claim wherein the fragrance is retained within the waxed material by a stabilizer.
- 6. An air freshener as claimed in any preceding
  Claim wherein the waxed material is formed from a plurality
  20 of different types of wax.
  - 7. An air freshener as claimed in any preceding Claim which is impregnated with a colouring agent and/or with titanium oxide in order to obtain the required waxiness/opaqueness.

- 8. An air freshener as claimed in any preceding Claim wherein the waxed material is made up from a plurality of individual pieces of wax.
- 9. An air freshener as claimed in Claim 8 wherein the plurality of wax pieces are shaped.
- 10. An air freshener as claimed in either Claim 8 or 9 wherein the plurality of wax pieces have a number of different shapes.
- 11. An air freshener as claimed in any one of Claims
  10 8 to 10 wherein the wax pieces are of different colours
  and/or different sizes.
  - 12. An air freshener as claimed in any one of Claims 8 to 11 wherein the air freshener is divided into different regions, and each region supplied with a plurality of
- 15 similar wax pieces, while the other regions are supplied with a plurality of different wax pieces.
  - 13. An air freshener as claimed in any one of Claims2 to 12 wherein the containment means is transparent.
  - 14. An air freshener as claimed in any one of Claims
- 20 2 to 13 wherein the containment means is heat-conductive in order to allow the naked flame to melt the wax contained within the containment means, and is also made from a material such that the containment means does not melt when the naked flame is applied.

- 15. An air freshener as claimed in any preceding Claim which is provided in kit form, with heating means, a container and a bag of wax pieces.
- 16. An air freshener substantially as described
- 5 herein with reference to the accompanying drawings.

1.0

15

20

PUB-NO:

GB002199246A

DOCUMENT-IDENTIFIER: GB 2199246 A

TITLE:

Wax air freshener

PUBN-DATE:

July 6, 1988

INVENTOR-INFORMATION:

NAME LAM, CHUN BIU MICHAEL

COUNTRY

N/A

ASSIGNEE-INFORMATION:

NAME

COUNTRY

KI YIP CHEMICAL WORKS LIMITED

N/A

APPL-NO:

GB08728552

APPL-DATE: December 7, 1987

PRIORITY-DATA: GB08728552A ( December 7, 1987)

INT-CL (IPC): A61L009/12

EUR-CL (EPC): A61L009/03

US-CL-CURRENT: 512/4

ABSTRACT:

An air freshener 10 comprises a body 12 of waxed material impregnated with a fragrance contained within containment means 14, which fragrance is released from the body 12 by heat. <IMAGE>